

# 2D Magic Enemy AI - Spell Casting, Camera Shake & VFX

## Your customizable 2D magic enemy prefab for Unity

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### Overview

The **Magic Enemy** prefab is designed to detect the player when they enter a configurable “line of sight” zone and attack by firing magic projectiles 🎯. It’s perfect for adding a dynamic and challenging enemy to your 2D game. You can easily tweak attack speed, frequency, detection area, and visuals—all from the inspector!

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### How to Set It Up in Your Scene 🛠️

Just drag the **MagicEnemy** prefab into your scene. You’ll see a red wireframe box in the Scene view—this is the enemy’s detection zone (lineOfSite). Adjust its size to control how far your enemy “sees” the player.

Make sure your player GameObject is tagged “Player” and assigned to the correct layer matching the enemy’s playerLayer. This enables proper player detection.

Add the **soundManager** prefab somewhere in the scene and assign it in the enemy’s inspector under soundManager. This prefab handles all audio: attack sounds, death sounds, and projectile explosions. You can swap audio clips inside the soundManager prefab to customize the sounds.

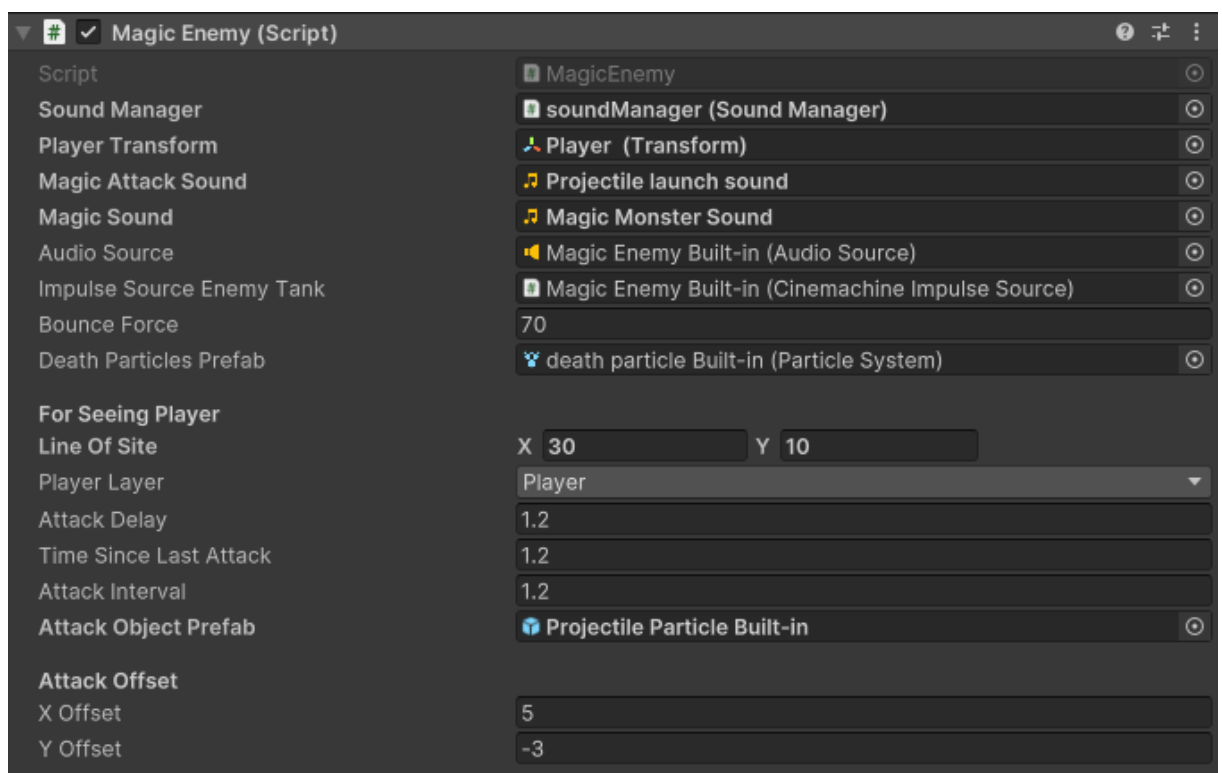


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## Customizable Inspector Variables

- **Detection Zone (lineOfSite):** Defines the size of the box where the enemy detects the player. Larger means the enemy spots the player from farther away.
- **Attack Frequency (attackInterval):** Controls how often the enemy launches projectiles. Smaller values mean faster attacks.
- **Projectile Spawn Offset (xOffset, yOffset):** Adjust where the projectile appears relative to the enemy (like their hand or staff position).
- **Attack Projectile (attackObjectPrefab):** Assign any projectile prefab you want here. This lets you customize visuals or effects without changing code.
- **Sounds and VFX:**

The package includes default sounds for magic attacks, death, and projectile explosions. You can replace these clips or particle systems in the inspector to fit your game's style.

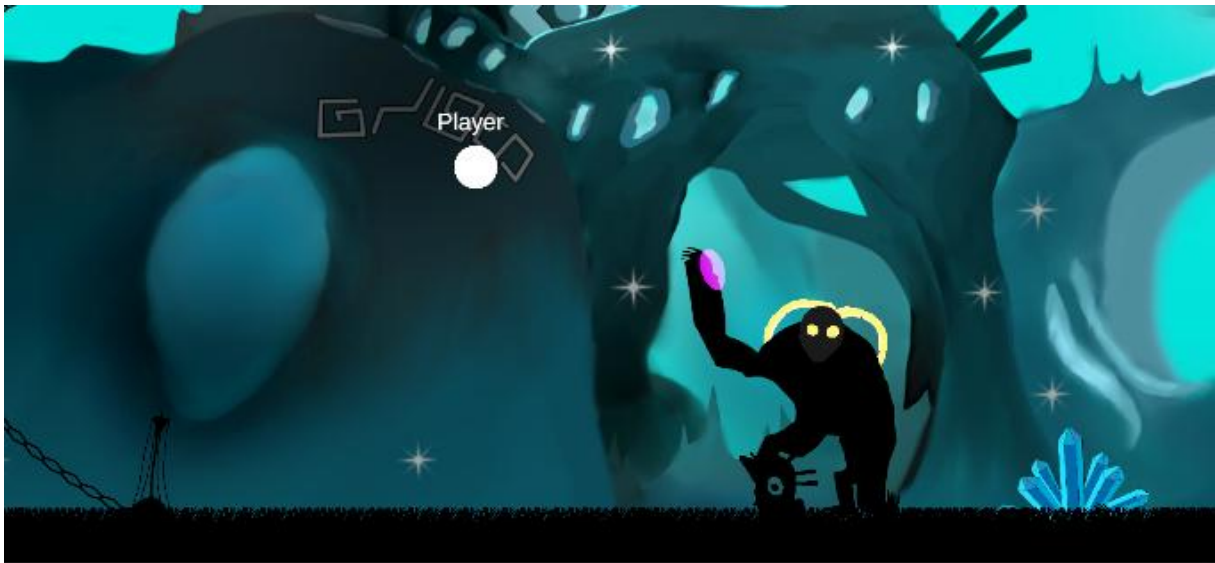


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## What Happens During Gameplay 🎮

Once the player enters the detection zone, the enemy flips to face them and starts attacking by shooting magic projectiles at the set intervals. Each attack triggers an animation and plays a sound effect. The projectile flies toward the player at the chosen speed, complete with launch and impact particle effects. On collision, it triggers a screen shake for extra impact!

If the player hits the enemy's body (death zone), the enemy plays death particles, plays a death sound, shakes the camera, and is destroyed. If the player hits the enemy's head (a separate kill zone), it causes instant death.

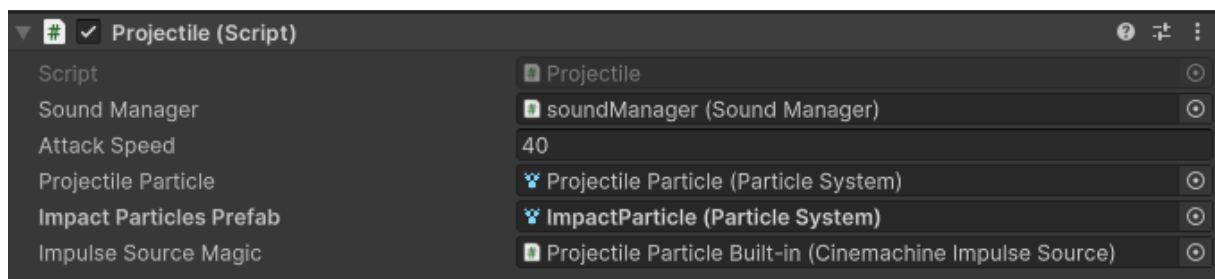


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## Projectile Prefab Details ✨

The projectile itself has its own script managing movement, particle effects on launch and impact, and camera shake on collision. You can easily swap out its particle systems and adjust its speed (attackSpeed) in the inspector.

When the projectile hits a wall, the player, or the ground, it plays an explosion sound and spawns impact particles before destroying itself. It uses the same **soundManager** prefab reference for consistent audio.



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## Sound Manager Prefab

The **soundManager** prefab centralizes a part of sound clips for the enemy system:

- **Projectile Explosion Sound**
- **Enemy Death Sound**

Just assign your audio clips here, and the enemy and projectiles will use these sounds automatically. This makes it super easy to swap sounds globally without touching multiple prefabs.

